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Proposed Maximum Residue Limit PMRL2017-31

Spirotetramat

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Publications
Pest Management Regulatory Agency
Health Canada
2720 Riverside Drive
A.L. 6607 D
Ottawa, Ontario K1A 0K9

Internet: pmra.publications@hc-sc.gc.ca

Facsimile: 613-736-3758
Information Service:
1-800-267-6315 or 613-736-3799
pmra.infoserv@hc-sc.gc.ca

Canada

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on carrots; sugar beets; and the extension to crop group 12-09 (stone fruit), and crop group 14-11 (tree nuts) to the product label of Movento 240 SC, containing technical grade spirotetramat, is acceptable. The specific uses approved in Canada are detailed on the label of Movento 240 SC, *Pest Control Products Act* Registration Number 28953.

The evaluation of this spirotetramat application indicated that the end-use product has value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

In addition, the PMRA is proposing to establish an MRL for spirotetramat on asparagus to permit the import and sale of food containing such residues. The PMRA has determined the quantity of residues that are likely to remain in or on the imported commodities when spirotetramat is used according to label directions in the exporting country, and that such residues will not be a concern to human health.

Consultation on the proposed MRLs for spirotetramat is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Canada's Notification Authority and Enquiry Point.

The proposed MRLs, to be added to the MRLs already established for spirotetramat, are as follows.

Table 1 Proposed Maximum Residue Limits for Spirotetramat

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
		4.5	Stone fruit (crop group 12-09)[2]
		0.25	Tree nuts (crop group 14-11)[3]
		0.15	Carrot roots, sugar beet roots

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
	cis-3-(2,5-dimethylphenyl)-4-hydroxy-8-methoxy-1-azaspiro[4.5]dec-3-en-2-one **BYI08830-ketohydroxy:** *cis*-3-(2,5-dimethylphenyl)-3-hydroxy-8-methoxy-1-azaspiro[4.5]decane-2,4-dione **BYI08330-enol-Glc:** *cis*-3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl β-D-glucopyranoside and **BYI08330-monohydroxy:** *cis*-3-(2,5-dimethylphenyl)-4-hydroxy-8-methoxy-1-azaspiro[4.5]decan-2-one calculated as parent equivalent	0.1	Asparagus

[1] ppm = parts per million
[2] The MRL of 4.5 ppm is being extended to all of crop group 12-09.
[3] The MRL of 0.25 ppm is being extended to all of crop group 14-11.

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of the Canada.ca website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for spirotetramat in Canada with corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food and Feed website, by pesticide or commodity.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Stone fruit	4.5 (CG 12-09)	4.5 (CG 12-12)	3.0
Tree nuts	0.25 (CG 14-11)	0.25 (CG 14-12)	0.5
Carrot roots	0.15	0.15	Not Established
Sugar beet roots	0.15	0.15	Not Established
Asparagus	0.1	0.1	Not Established

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for spirotetramat up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data for spirotetramat in carrot roots and sugar beet roots were submitted to support the domestic use of Movento 240 SC. Peru residue data for spirotetramat in asparagus was submitted to support the maximum residue limit on imported asparagus. Previously reviewed residue data from field trials conducted in/on cherries, peach, plum, almond, and pecan were reassessed in the framework of this petition to extend MRLs from crop group 12 to crop group 12-09, and crop group 14 to crop group 14-11. In addition, a processing study in treated sugar beet roots was reviewed to determine the potential for concentration of residues of spirotetramat into processed commodities.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for spirotetramat was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for asparagus, carrot roots, sugar beet roots, stone fruits (crop group 12-09), and tree nuts (crop group 14-11).

Table A1 Summary of Field Trial and Processing Data Used to Support MRLs

Commodity	Application Method/ Total Application Rate (g a.i./ha)[1]	Preharvest Interval (days)	Lowest Average Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)
Asparagus	Foliar broadcast spray /223-230	41-42, 47	<0.05	<0.05
Carrot root	Foliar broadcast spray /175-186	1-2	<0.05	0.105
Sugar beet root	Foliar broadcast spray /314-331	28-34	<0.05	0.072
Cherries			0.318	2.044
Peach			0.414	1.109
Plum			0.091	0.683
Almonds			0.05	0.128
Pecans			0.05	0.296

[1] g a.i./ha = grams of active ingredient per hectare

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover the residues of spirotetramat. Total residues of spirotetramat in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.